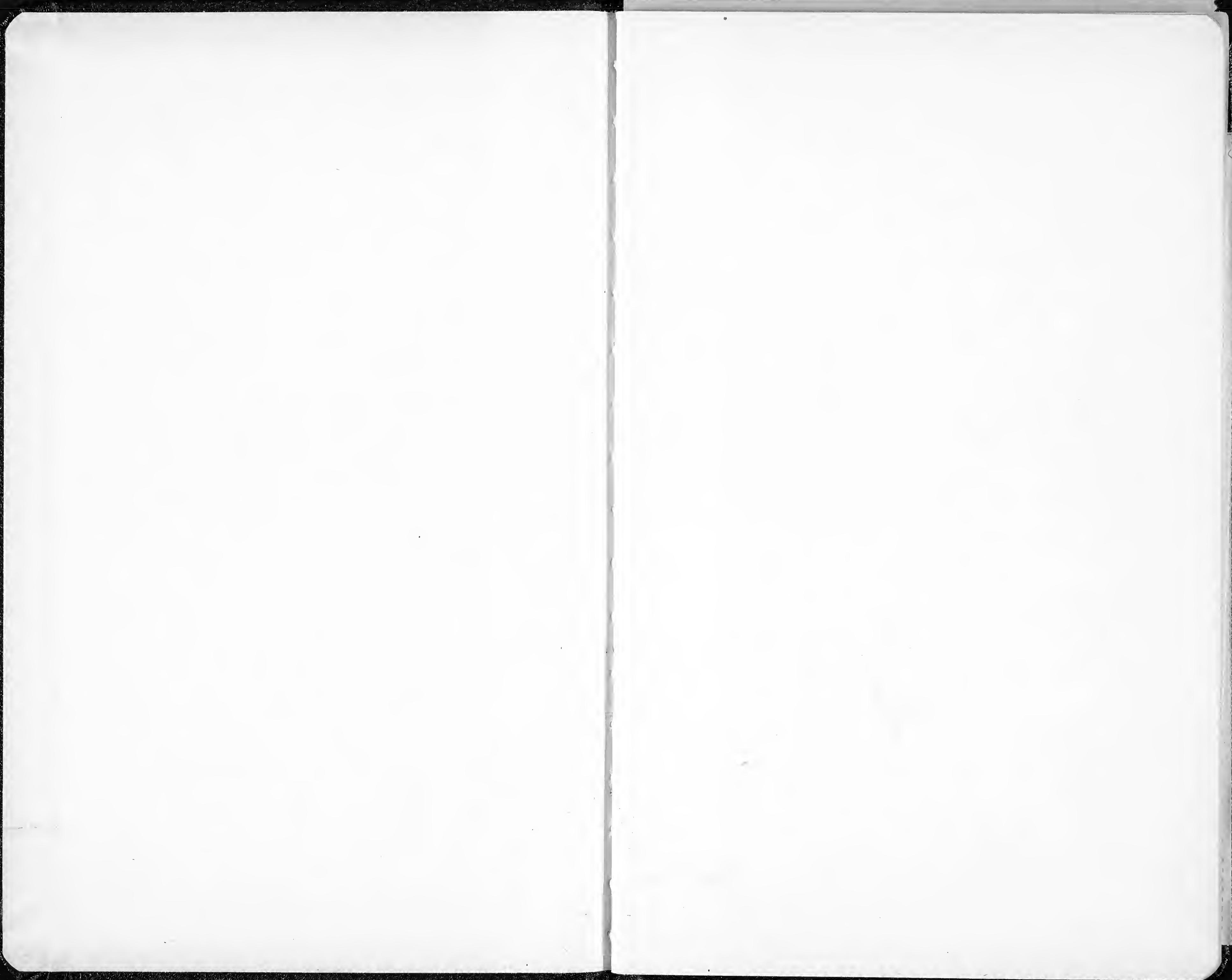


7530-274-5494
FEDERAL SUPPLY SERVICE





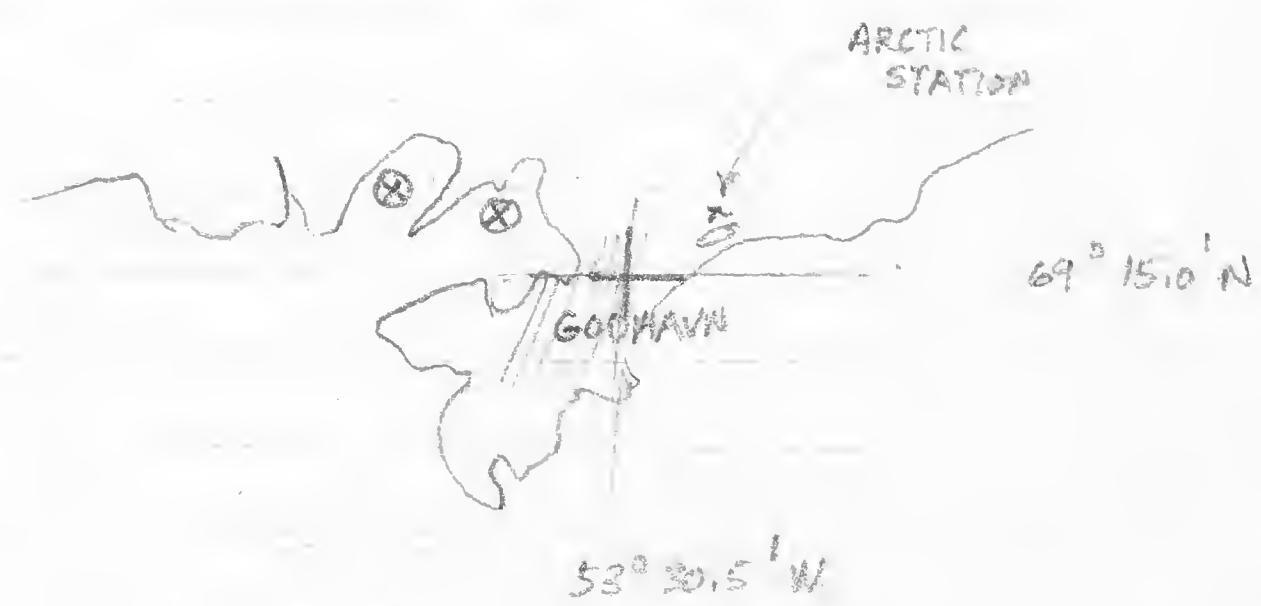
810827.1

GODHANN, GREENLAND

R HIGGINS & R KRISTENSEN

27 SEP 81

810827.1



28 SEP 81 810828.1

X 69° 08.6' N 53° 50.0' W

810903/4

DISKO ISLAND, GREENLAND

R. HIGGINS & R. KRISSENSEN

03 SEP 81

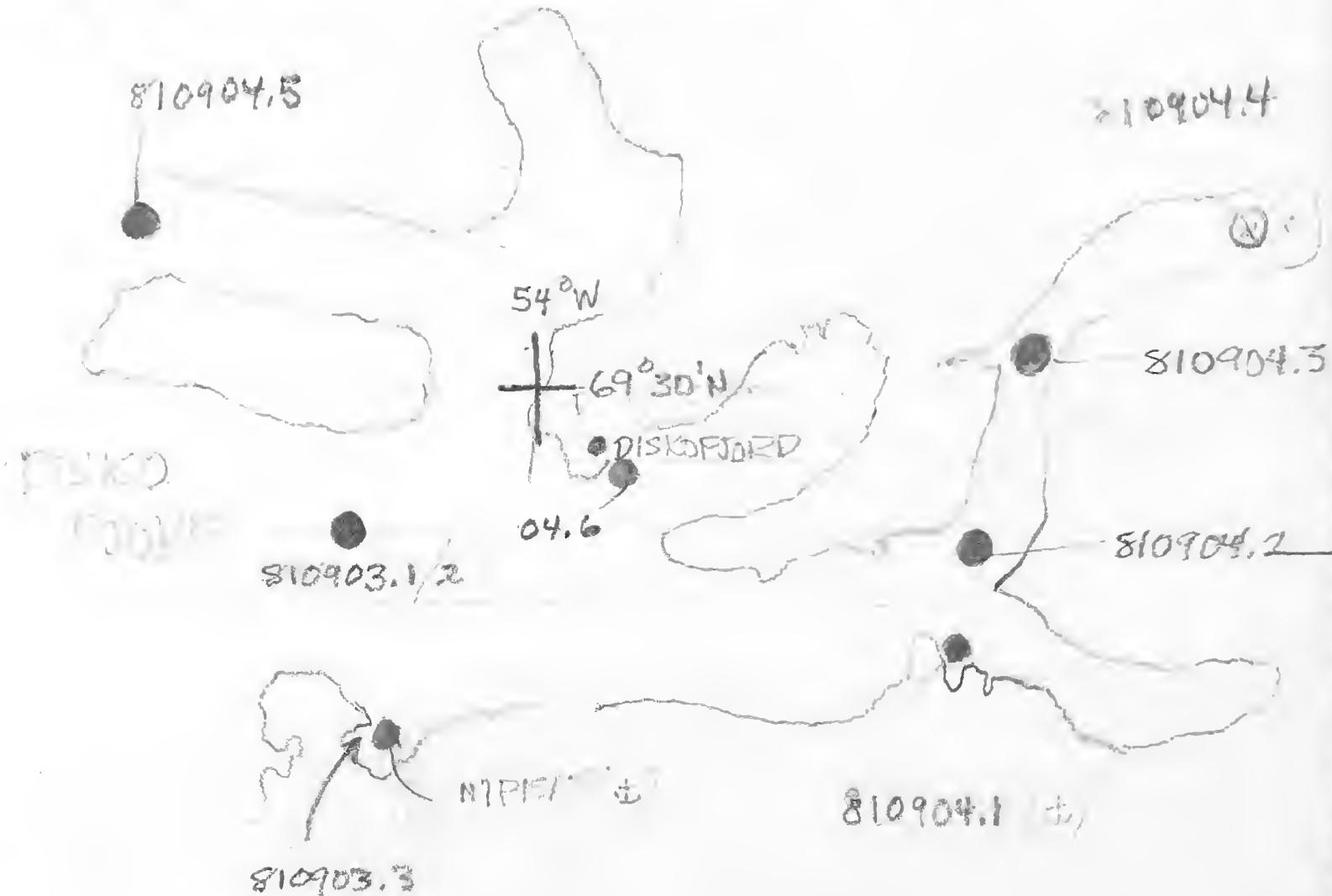
810903.1 recorded as one sample, 810903.1 (R)
200M 2°C SANDY MUD 2X 0.1M² VVG 34%
0.2 200M 2°C SANDY MUD HMB 34%
0.3* 1 M 3°C MUDDY SAND + ROCK 0.1M² VVG 25%

04 SEP 81

810904.1 6.5 M MUD + PEBBLES 3X 0.1M² VVG 34% = 3°C
0.2 E 140 M SANDY MUD HMB 34% 4°C
0.3 E 120 M BROWN MUD HMB 34% 5°C
0.4 X 80 M BROWN MUD HMB 34% 5°C
0.5 PE 200 M BROWN MUD HMB 34% 5°C
0.6 E 9 M MUD + ROCK 0.1M² VVG 34%

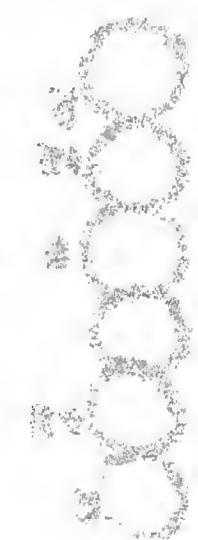
810904.5

810904.4



810909.1 Tide pool, filamentous algae, near high tide level
Tardigrade

810909.2 Tide pool, *Riccia* holdfast
Isopod



- 810912.1 66M 0.1M VUG }
 ,2 90M HMD
 ,3 60M HMD
 (4) 100M HMD
 ,5 30M HMD
 ,6 15M HMD
 ,7 5M 0.1MVGX
 ,8 3M 0.1MVGX
 (9) 225M

No benthopelagic
 No lamellibranchs
Ampeliscidae! No kinolichids
Pycnophyes w/ very few Echinoderm
 amphipods/superfauna, polychaetes
 SKANSEN STATIONS

Echinoderm

Note where amphipods are abundant, samples lack kinolichids
 and other fauna except for nematodes + harpacticoids.

Keep for K

SAUDI ARABIA / ARABIAN GULF

Acc. 353876

record but
give to Reinhardt

81029.1

AMCO
note

SATT proj see
mines sheet

Acc.
353877

RPH (Tardigrade?)
to RMK

Acc.
353877

RPH (RH Nos!)
w KINO

Saudi Arabian
Collection

✓ Higgins collection
Aransas

Tetra Tech - 30 lots

500+

Reinhardt

Hilstensen

Nos Acc

26°N +
50°E

HALF MOON
BAY
821029.1 (100 m from shore)
821029.2 (intertidal beach
bay side)
821029.3 (intertidal beach
oceanside)

SUNSET BEACH

821029.3

821029.1 821029.2
HALF MOON BAY

Saudi Arabian

Collection

Higgins collection
Arancio

Tetra Tech - 20 lbs
Reinhardt 500 t
Krisleren
Iras Acc.

Dhekor

Saleedi

81029.1

81029.2

81029.3

~~Tue~~ Apr. 10

Am.

830131.4
New # to 830206.4

Reinhardt ✓

RH 1668
+ Acc #

830201.0

Acc # 348815

SATT - Acc

353878

Keep for K

SAUDI ARABIA / ARABIAN GULF

Acc. 353876



From
ARAMCO
see note

record but
give to Reinhardt

Acc. 353878
(25 vials)
the
simply at
reinhardt
only

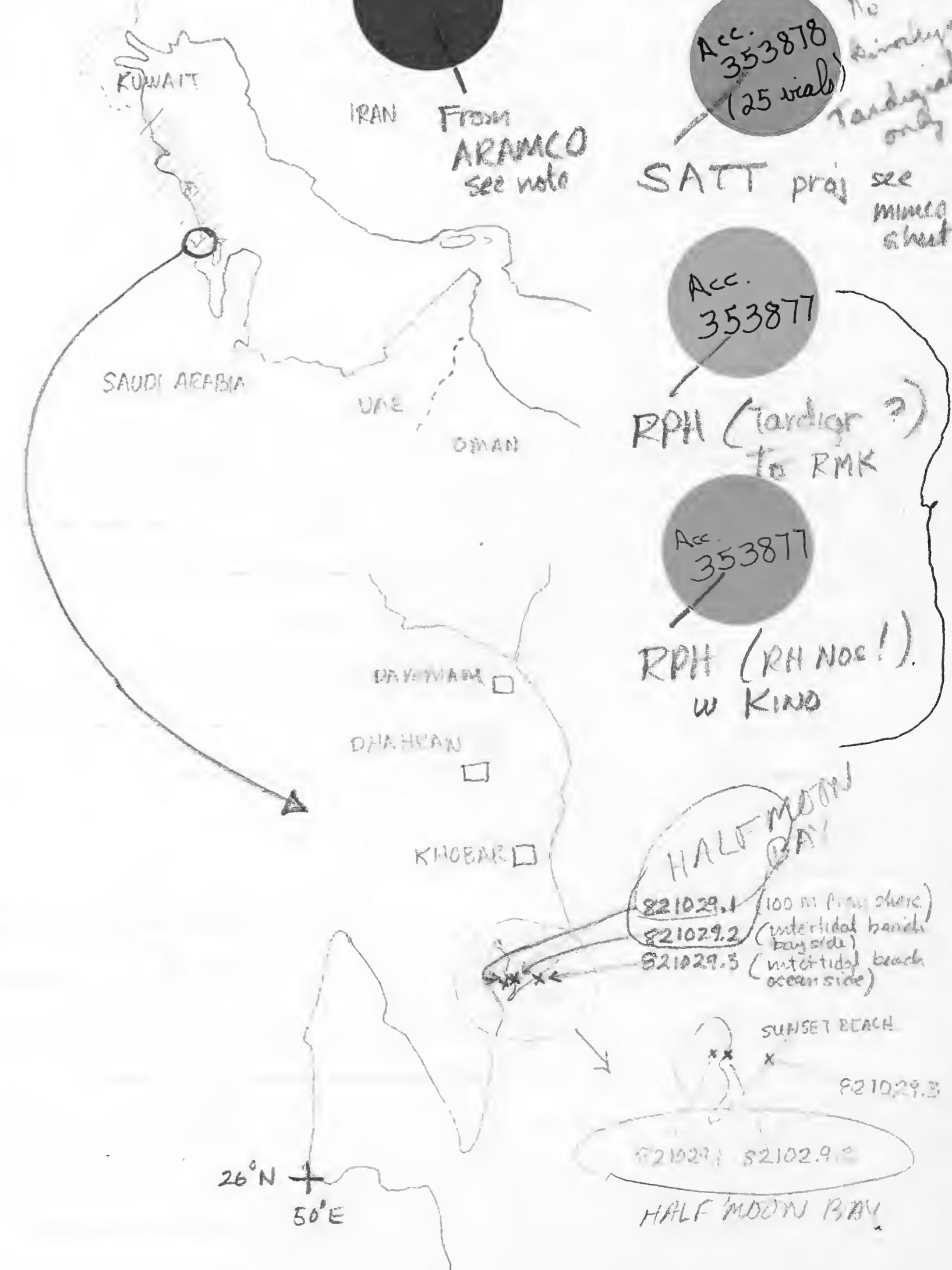
SATT proj see
mines sheet

Acc.
353877

RPH (Jardigr?)
to RMK

Acc.
353877

RPH (RH nos!)
w KINO



54321



29 OCTOBER KHOBAR, SAUDI ARABIA

821029.1 Half Moon Bay, S of Khobar (n 100 m offshore) E of beach

(S) 1 M (at midtide) 81°F 51%o Fine sand with
whitened floc on surface

26°9.9'N 50°10.1'E

Echinodores (possibly 2 spp)5% formalin Col. R. Higgins Benthic scoop sampler/
bubble 1-5ml(R), 1-50ml(W)

RH1674

821029.2 Beach of Half Moon Bay, S of KHOBAR
Intertidal beach sample (at midtide) 0-0.2 m stratum
fine sand 81°F 51%o
26°9.8'N 50°10.1'E

RH1675

5% Formalin Col. R. Higgins shovel/FW wash + decant
1-50ml(W)

Drew to Reinhardt to check for

821029.3 Sunset Beach (S of Half Moon Bay) S. of KHOBAR Tardigrades
Intertidal beach sample (at midtide) 0-0.2 M stratum
medium sand 81°F 45%o
26°9.9'N 50°10.1'E

RH1676

5% Formalin Col. R. Higgins shovel/FW wash + decant
1-50ml(W)Drew to Reinhardt to check
for Tardigrades

1 NOVEMBER Previously collected 63 µm fractions (See notes enclosed.)

STA 7I4C

SAFANIA

rich station (W)

7I4B

7I4A

31 JUL 82

31 JUL 82

31 JUL 82

(5% F/RE) Tardigrades (Lecithopis 5, others 2)

Hypactiids (1-2 spp) 5, Scyria 2, Nematoda 3

Polychaetes 1

-do-

Styapat 2, Nema 3, Tard 2, Poly 1

7I3A

7I3B

7I3C

31 JUL 82

(5% F/RE) Nematodes 3, Hypactiids, Acarina 1

Tardigrades 1, Lecithopis, Helcogramma 1, Polychaete 2

-do-

Nema 2, Poly 2, Hyp 2, Acaria 2

Tard, Acaria 1, Turb 2

Nema 2, Poly 2, Turb 2

7I2A

7I2B

7I2C

31 JUL 82

Nema 2, Poly 2, Hyp 1

Nema 2, Poly 2, Hyp 1, Tard 2, Turb 1

Nema 2, Poly 2, Hyp 2

7I1A

7I1B

7I1C

31 JUL 82

nema 1, poly 1, cop 1, turb 1, acaria 1

nema 1, poly 1, cop 1, turb 1, acaria 1

-do- + nema 1, acaria 1

2 NOVEMBER RAS AL TANAJIB
ARAMCO Sediment Trap station
821102.1 Shallow water station 1 at Tanajib

RH1677

gray clay with some sand

821102.2

sand w/ some silt

RH1678

Few Echinoderm, few planaria, ostracodes,
underlying chalky mkt., strong turbellarian?

821102.3

-do Station IV?

RH1679

medium sand/ silt w/ some silt
Many Pycnophyes (2 spp)

27° 50' N

49° 50.6' E

6 NOVEMBER ARAMCO (spms received from Linda STANLAND, ARAMCO)

ARAMCO 740729 E2/IA

29 Jul 74

see note

Echinoderm sp 1 (10 spms) (cf E. coualli)

E. sp (1 spm)

Semmoderes? (5 spms)

see ltr from J. Burchard

RH1672

730214 D/1
ARAMCO 740214 D/1

see note

Kinorhynchus sp. Juv (1 spm)

14 Feb 1973

RH1673

27° 50' N

49° 50.6' E

2 NOVEMBER RAS AI TANAJIB
ARAMCO Sediment Trap station
821102.1 ~~Stn 1~~ Station 1 at Tanajib

RH1677

gray clay w/ some sand

2 or 3 m. fine; 1 open Spirorbis (?)

1 spm Echinodera

Not as juvenile stage, old, many broken, no eggs, mostly abraded. In area recently dredged, though, could be old broken shells.

note

821102.2

sand w/ some silt

RH1678

Few Echinodera, few Lamellibrachia, ostracodes, interesting chaetognaths, strong turbellarian?

821102.3

-de Station 14°

RH1679

medium sand/silt w/ some silt

Many Agenophryes (2 spp)

6 NOVEMBER ARAMCO (spms received from Linda STANLAND, ARAMCO)

ARAMCO 740729 E2/IA

29 Jul 74

see note

Echinodera sp 1 (10 spms) (cf E. coulli)

E. sp (1 spm)

Sennuderes? (5 spms)

see ltr from J. Burckhard

RH1672

730214 D/1

ARAMCO 730214 D/1

see note

Kinorhyncha sp. Juv (1 spm)

14 Feb 1973

RH1673

1274 = 67

→ NOVEMBER Previously collected 63 μ m fractions
 STA 2I4 A (63 μ)^w tard^① nema^② poly^③ copa^④ mites^⑤
 30 JUL 82 TANAJIB

STA 2I3 A (63 μ)^w tard^① nema^② poly^③ copa^④ nemat^⑤ turb^⑥
 30 JUL 82 TANAJIB

STA 2I2 A (63 μ)^w nema^① harp^② poly^③ turb^④ hydrazoa^⑤
 30 JUL 82 TANAJIB

STA 2I1 A (63 μ)^w nema^① turb^② poly^③ harp^④
 30 JUL 82 TANAJIB

STA 6I4 A (63 μ)^w nema^① stigo^② copa^③ collembola^④ (w/orange floc!)
 18 MAY 82 TANAJIB

STA 6I3 A (63 μ)^w -do- (but w/more fibers)

STA 6I2 A (63 μ)^w -do- (no floc)

STA 6I1 A (63 μ)^w -do- (no floc)

STA 6I4 A (63 μ)^w poly^① nema^② tard^③ collemb^④ oligo^⑤ copa^⑥
 31 JUL

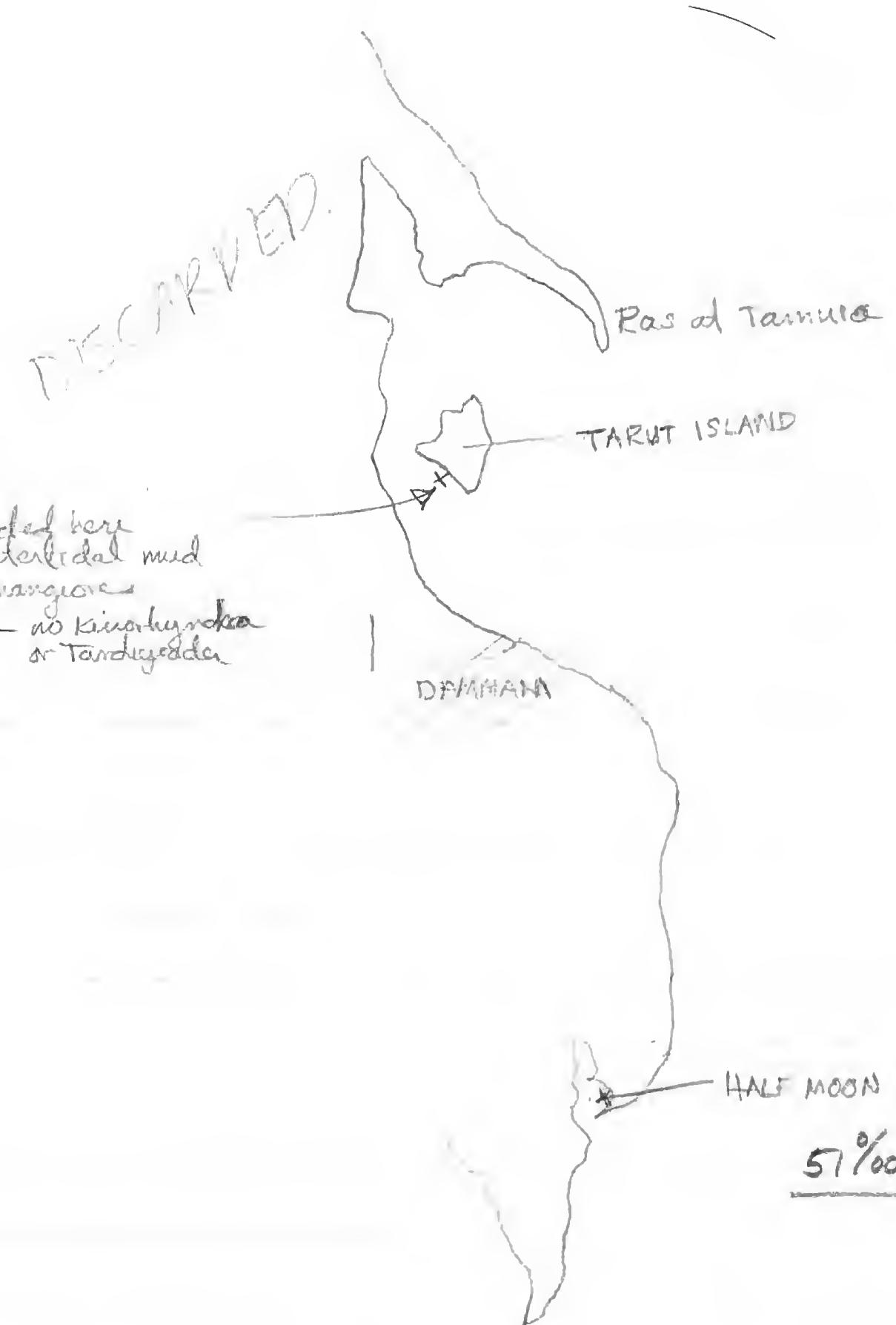
6I3 A (63 μ)^w

6I2 A (63 μ)^w

6I1 A (63 μ)^w

→ NOVEMBER 82
 TARUT ISLAND

50°E
 + 27°N



I I 4 (w)

29 JUL 82

I I 3 (w)

I I 2 (w)

I I 1 (w)

8 I 4 (w)

31 JUL 82

tard^③

8 I 3 (w)

8 I 2 (w)

8 I 1 (w)

NOTE:

①	T-Shirts	Small	2	
		Medium	12	Brown w/ yellow
		Large	17	
		X Large	3	
			<u>24</u>	

send bill to John for
reimbursement

Rec'd 7 Nov \$150

Mail us shirts w/ Xmas card
"John & Judy"

② Send SI tel. number to John McCain

③ Send John info on VIMCO

9 NOVEMBER 1982

TANAJIB
821109.1
 $27^{\circ}47.5'N$
 $48^{\circ}48.9'W$

RH 1680

821109.1

(10)
(20)



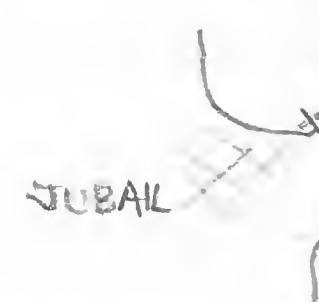
RAS AT TANAJIB

821109.1 shallow embayment
(hyper saline) ca 1 m depth
muddy sand
 $13-35^{\circ}F$
 $55-94^{\circ}F$
 $35-44\%$

Lipid layer Psammophiles

DISCARDED

821109.2



821109.2 sand, ca 1-5 m depth,
near marsh at SE corner.

ALIIN SAND

TANAJIB

821109.1

27°47.5' N

48°48.9' W

NOTE:

①	T-Shirts	Small	2
		Medium	12
		Large	17
		X Large	3
			<u>34</u>

Brown w/ yellow

send bill to John for
reimbursement

Rec'd 7 Nov \$150

Mail US shirts w/ Xmas card
"John & Judy"

② send SI telex number to John McCain

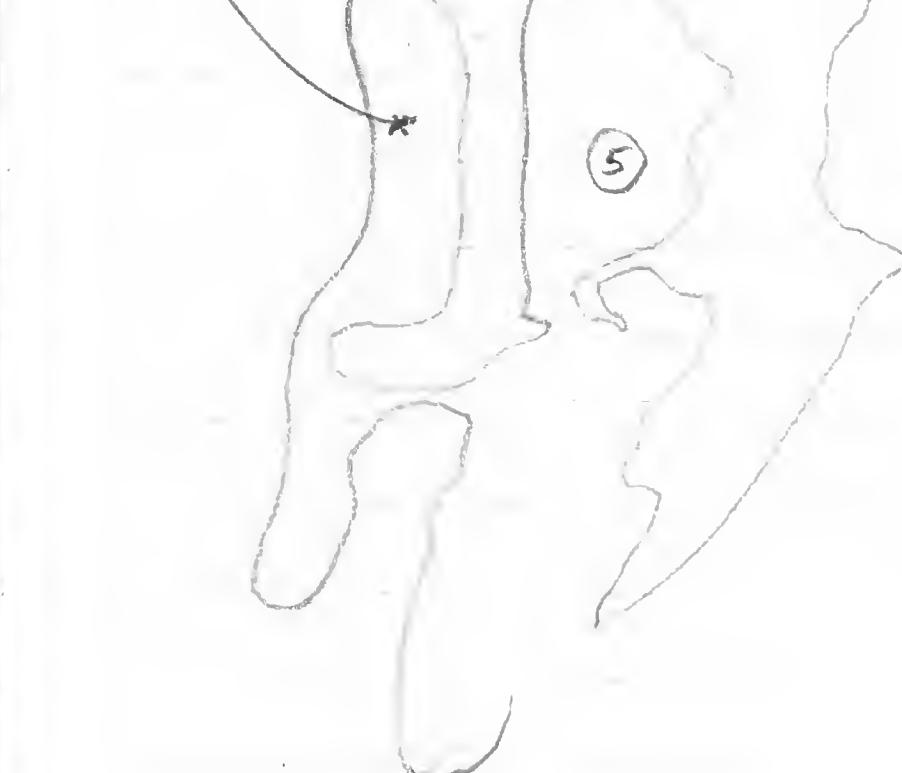
③ send John info on VIMCO

9 NOVEMBER 1982

RH 1680

821109.1

RE
NO



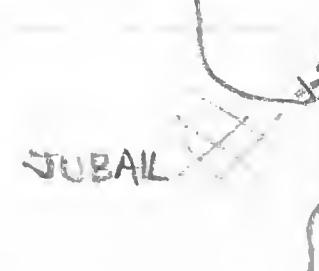
RAS AT TANAJIB

821109.1 shallow embayment
(hyper saline) ca 1 m depth
muddy sand 13 - 35°F
55 - 94°F
35 - 44‰

~~Halimeda~~ Ruppia Posidonia

DISCARDED

821109.2



821109.2 Sand, ca 1-5 M depth,
near marshes at SE corner.

CLEAN SAND

1. Mail letters for John PAID
2. Mail letters for Me
3. Mail large envelope CERT RET REC ROSTD PAID
4. Mail pkg for Ralph PAID
Mail pkg for Judy FIRST CLASS PAID
5. Order T-shirts
 - a) send listed shirts to 7 people direct (see list by John)
 - b) INCLUDE xmas cards "Judy & John McCam" to 7 above PAID

SMALL 2

MED 12

LARGE 17

X-LARGE 3

$34 + 2$ (one for Al
one for Ralph) = 36

Yellow on Brown

rec'd. \$150 in advance

NOTE
see item 17 *

- c) send bill for 36 shirts sent to John
- d) send all but 7 shirts (above) to John via DHL (see attached)
- e) bill John later for balance of shirts + DHL costs

6. Send John SJ Telex number
7. Send John VIMCO info
8. ~~Send~~ Burchard copy of BM(NH) NERC report on systematics
9. ~~Send~~ John copy also
10. Give copy of intertidal data to Duane Hope + DHL address
11. Send John "FRANKS COPY TO GBL"
12. For Mary Rice - Do you want Sipunculans?
13. For Al - Ghozlan $26^{\circ}40'N \sim 50^{\circ}E$
14. Send "How to collect Kuroshio" to Linda et al/J. Burchard + to Ralph
15. Tell John SR 820 for hotel, tips, taxi + 152 hrs @ \$1 / hr = \$152
for turn over to res. fund.

16. For Ralph 2 Large
1 Med
2 Small
(5) PAID

Send to Ralph Hawan
308 Kihapai St
Kailua, HI 96734

(808) 261-6013

17. For Mic 9 Large }
2 Med }
(11) PAID

Send to Mic Griben
Whetstone Rd
Harwinton CT 06991

(203) 485-1448

* → + 1 Large } incl. w/ shpnt to John via DHL
(12) PAID by Ralph

TOTAL T-SHIRT ORDER

	JOHN	RALPH	MIC	BOB	AL	PT /PC	P /PC
SMALL	2	(2)					4
+ 3 MED	12	1	2			1	16 13
+ 3 LARGE	17	2	10	1		(2)	34 13
X-LARGE	3				①	2	= 6
PAUL PT	—	34	5	12	1	1	3 3
+ 6		(35)					
④0 total \$150 need							

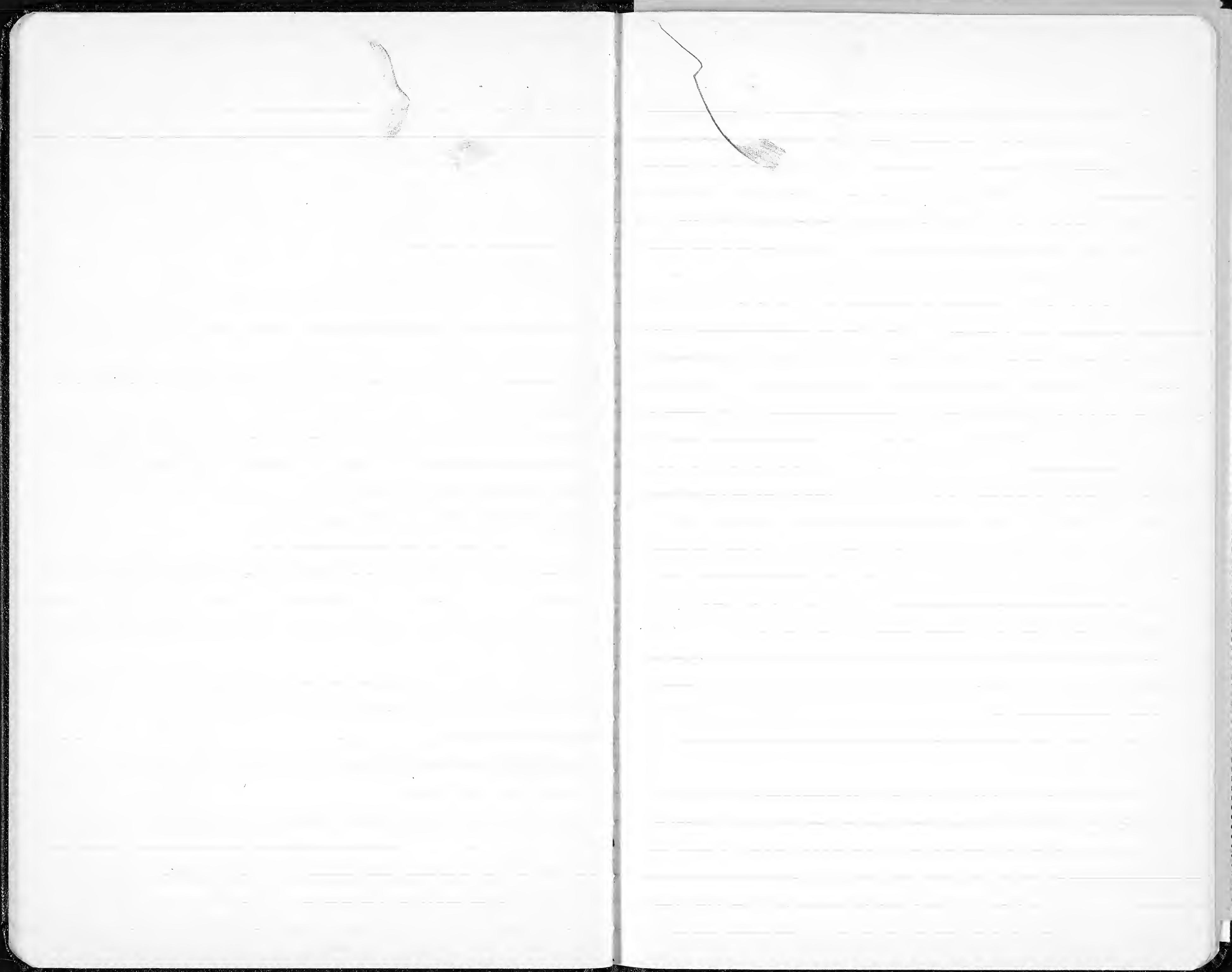
all one size
via 2d
mic, Ralph

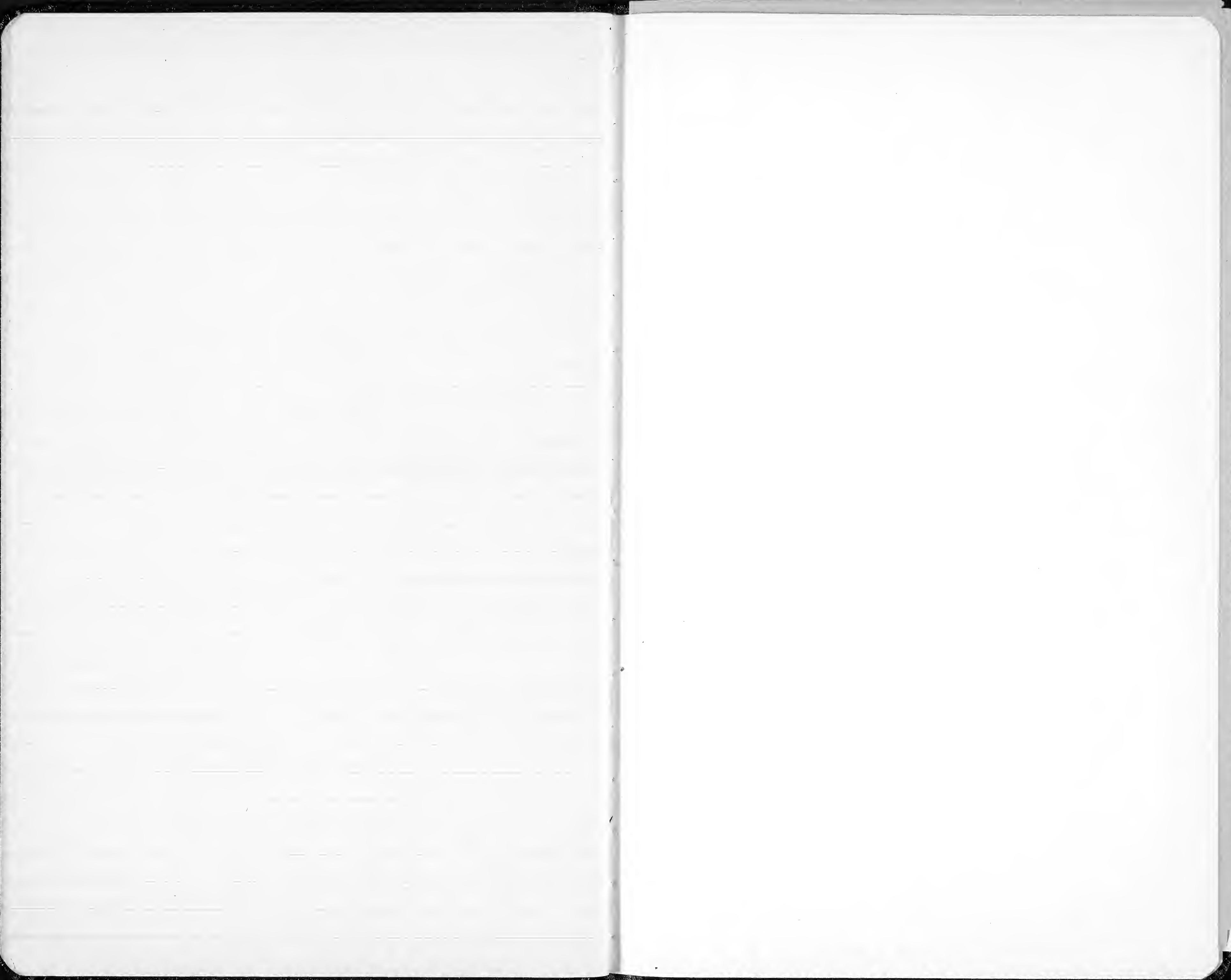
18. Make Knoblych print for Ralph also membership badge plans

19. Make photoway (for frame) T-shirt design for Ralph John + Mic

20. Get film (prints) developed (PAID) & send to Mic's address in CT.











Sunset Beach, S of Al Khobar (mtn)
821029.1 81°F 51‰
fine sand w/
surface flocc.
in 5% formalin
1 m at mid tide
2 spp Echinoidea

26°9.9'N 50°10.1'E

Sunset Beach S of Al Khobar
821029.2 81°F 51‰
intertidal fine sand
in 5% formalin 0-0.3 M in beach

26°9.9'N 50°10.0'E

Sunset Beach S of Al Khobar
821029.3 80° 41‰
interstitial medium sand
in 5% formalin -0-0.3 M in beach
26°9.9'N 50°10.1'E

EMPLOYEE	SIZE	PERMANENT ADDRESS
STEPHEN L. COLES	LARGE	HAWAIIAN ELECTRIC CO. ENVIRONMENTAL DEPARTMENT P.O. BOX 2750 HONOLULU, HAWAII 96840
THOMAS M. GRIEB	X-LARGE	4438 ASCOT DRIVE OAKLAND, CALIFORNIA 94611
ROBERT M. HANSEN	LARGE	3026 CIELO PL. CARLSBAD, CALIFORNIA 92008
ATSUHIRO KUBO	MEDIUM	2426 E NEW YORK DR. ALTADENA, CALIFORNIA 91001
CLARK LEWIS	LARGE	96-1694C KAAHUMANU ST. PEARL CITY, HAWAII 96782
DAVID PATTERSON	LARGE	TETRA TECH, INC. 630 NORTH ROSEMEAD BLVD. PASADENA, CA 91107
THOMAS R. SOPER	LARGE	TETRA TECH, INC. 630 NORTH ROSEMEAD BLVD. PASADENA, CA 91107

Christmas Cards - From
John & Judy McGivin

ADD 2 more med. to you list.

